

Appl. No. 10/711,683  
Docket No. 03-025/PES-0220

### REMARKS / ARGUMENTS

In addition to the amendments and remarks set forth herein, Applicant respectfully requests consideration of the art submitted in the IDS filed March 13, 2006.

#### Status of Claims

Claims 1-22 are pending in the application and stand rejected. Applicant has amended Claims 1, 13 and 20, and has added new Claim 23, leaving Claims 1-23 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

#### Rejections Under 35 U.S.C. §102(b)

Claims 1-3, 8-13, 16-22 stand rejected under 35 U.S.C. §102(b) as being anticipated by Faita et al. (U.S. Patent No. 5,565,072, hereinafter Faita).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the \*\*\* claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements "*arranged as in the claim.*" *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984) (emphasis added). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

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Applicant respectfully disagrees that Faita discloses each and every element of the claimed invention arranged as claimed.

Regarding Independent Claims 1, 13 and 20

Applicant has amended independent Claims 1, 13 and 20, to now recite, inter alia,

"...wherein the first layer and third layer are metallurgically bonded together to define a first bond line that encompasses the first plurality of channels, the first inlet port and the first outlet port;

wherein the second layer and third layer are metallurgically bonded together to define a second bond line that encompasses the second plurality of channels, the second inlet port and the second outlet port; and..."

The Examiner remarks: "Firstly, the Office points out that Faita does not disclose a solid part, but layers. Faita discloses a bipolar plate with layers in which the bipolar plate assemblies with the gasket... Thus, in light of the interpretation of Faita, the prior art has been found to read on the instant claims." Advisory Action Paper No. 20060314, page 2.

At column 6, lines 48-49, Applicant finds Faita to disclose "...the gasket-frame [8] is made of an elastomeric castable material."

If Applicant was to accept the Examiner's interpretation of Faita (understood by Applicant to mean that the bipolar plate assembly includes the gasket as a layer), then Applicant respectfully submits that Faita fails to disclose the first and third layers being metallurgically bonded, and the second and third layers being metallurgically bonded, as claimed in the instant invention as amended.

Accordingly, and absent anticipatory disclosure of each and every element arranged as claimed, Faita cannot be anticipatory.

The Examiner further remarks: "In response [to Applicant's assertion that discrete layers are present], the Office notes that the Applicant does not claim discrete layers in the instant set of claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims." Advisory Action Paper No. 20060314, page 3.

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While Applicant submits that the originally filed claimed language "first layer, second layer, and third layer" would be sufficient for one of ordinary skill in the art to appreciate that the claimed invention was directed to discrete layers, Applicant has nonetheless further amended independent Claims 1, 13 and 20 to now recite, inter alia,

"...wherein each of the first, second and third layers are distinguishable from each other and capable of being made from a different material...".

Here, Applicant more clearly describes and claims the invention to be other than non-discrete layers that are bonded/laminated.

Additionally, Applicant notes that while the Examiner remarks in the Advisory Action Paper, page 2, that "...Faita does not disclose a solid part, but layers. Faita discloses a bipolar plate with layers...", the Examiner remarked in the Final Action Paper, page 4, that "...Faita discloses a bipolar plate with a first and second side comprising grooves (through channels) (15:66-67) and holes (ports) (3 fig. 2) connected by distribution channels (header channels) (3 fig. 2)...", and on page 3 of the Final Action Paper that "the claimed layers in the bipolar plate are present as one layer in the final product...".

In the Final Action Paper, Applicant understood the Examiner to be rejecting the claimed invention based on the one layer of the Faita bipolar plate 1 of Figure 2, while from the Advisory Action Paper, Applicant now understands the Examiner to be rejecting the claimed invention based on the combination of the Faita bipolar plate 1 (Figure 2) and the Faita gasket 8 (Figure 3).

If the Examiner maintains the anticipatory rejection of the claimed invention in view of Faita, Applicant respectfully requests clarification with regard to which elements of Faita are being used for this rejection.

In addition, Applicant respectfully submits that only from the claimed invention is one apprised of the benefit of making a bipolar plate from a diffusion bonded lamination arrangement where the layers have through-hole channels (through holes pierced through

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each layer), thereby providing for complex channeling in a compact and seal-tight configuration.

Contrary to the Examiner's remarks, Applicant submits that the limitation of laminated and bonded layers is substantial, and that such limitations provide a point of distinction over prior art directed to a single bipolar plate with flow grooves (Faita discloses bipolar plate 1 with grooves, not through-holes), or a layered assembly with grooves in a bipolar plate and other grooves in an elastomeric gasket/frame.

Dependent claims inherit all of the limitations of the respective parent claim.

In view of the foregoing, Applicant submits that Faita does not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) has been traversed, and requests that the Examiner reconsider and withdraw of this rejection.

**Rejections Under 35 U.S.C. §103(a)**

Claims 4, 5 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Faita and further in view of Wilson (U.S. Patent Application No. 2004/0197630, hereinafter Wilson).

Claims 6, 7 and 15 stand rejected under 35 U.S.C. §1039a) as being unpatentable over Faita and further in view of Toshihiro (JP-05-251097).

Applicant traverses these rejections for the following reasons.

Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention in such a manner as to perform as the claimed invention performs. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of establishing that all elements of the invention are taught or suggested in the prior art. MPEP §2143.03.

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Claims 4-7, and 14-15 are dependent claims, and dependent claims inherit all of the limitations of the parent claim and any intervening claim.

In view of the foregoing discussion regarding the rejections under 35 U.S.C. §102, Applicant submits that Claims 4-7 and 14-15 are allowable for at least the reason that they now depend from allowable claims. In considering the References as a whole, Applicant submits that the secondary references fail to cure the deficiencies of Faïta.

In view of the foregoing, Applicant submits that the References fail to teach or suggest each and every element of the claimed invention and are therefore wholly inadequate in their teaching of the claimed invention as a whole, fail to motivate one skilled in the art to do what the patent Applicant has done, fail to recognize a problem recognized and solved only by the present invention, fail to offer any reasonable expectation of success in combining the References to perform as the claimed invention performs, and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the forgoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

#### **Regarding New Claim 23**

Applicant has added new Claim 23, which depends from Claim 1, to capture disclosed but previously unclaimed subject matter. No new matter has been added as antecedent support may be found in the application as originally filed, such as at Figure 4 and at Paragraph [0028], for example.

For at least the reasons set forth herein regarding the allowability of Claim 1, Applicant submits that Claim 23 is allowable and respectfully requests notice thereof.

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**Regarding the March 13, 2006, IDS**

With regard to the art of the March 13, 2006, IDS, Applicant submits that the art fails to disclose, teach or suggest:

"...wherein each of the first, second and third layers are distinguishable from each other and capable of being made from a different material;

wherein the first layer and third layer are metallurgically bonded together to define a first bond line that encompasses the first plurality of channels, the first inlet port and the first outlet port;

wherein the second layer and third layer are metallurgically bonded together to define a second bond line that encompasses the second plurality of channels, the second inlet port and the second outlet port...",

in combination with the other claimed elements, and therefore cannot be anticipatory or be used to properly establish a prima facie case of obviousness.

In view of the foregoing, Applicant submits that the application is now in condition for allowance, and respectfully request notice thereof.

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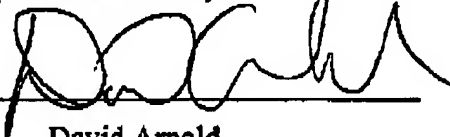
The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-identified Deposit Account.

Respectfully submitted,

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